
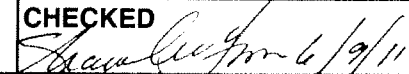

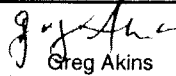
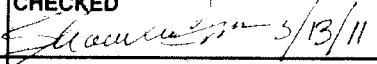



FEATURE: Klamath River Dams Removal Partial Removal Option Copco No. 2 Dam & Powerplant Removal Most Probable Life Cycle - 50 Year Summary	PROJECT: Klamath River Oregon	
	WOID: AF652	ESTIMATE LEVEL: Feasibility
	REGION: MP	UNIT PRICE LEVEL: Jul-10
	FILE: U:\2011 Projects\Klamath\002 Completed Sheets\MP MPL MPH\02 - Copco 2\MP\{Copco 2 Probable.xlsx}Life Cycle Summary	

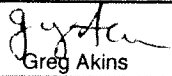

PLANT ACCOUNT	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		Periodic Costs - Year 1					\$216,040.00
		Periodic Costs - Year 8					\$119,410.50
		Periodic Costs - Year 17					\$110,660.00
		Periodic Costs - Year 25					\$60,063.30
		Periodic Costs - Year 33					\$57,956.80
		Periodic Costs - Year 42					\$30,211.50
		Periodic Costs - Year 50					0.00
		Annual Costs - Maintenance					\$967,383.00
		(Assumes gov't service / construction contracts)					
		Subtotal 1					\$1,561,725.10
		Mobilization	5%	+/-			\$78,000.00
		Subtotal 1 with Mobilization					\$1,639,725.10
		Escalation to Notice to Proceed (NTP): from Unit Price Level (July, 2010) to NTP (July, 2020)					\$563,927.90
		at 3.0% per year for 120 months.					
		Subtotal 2 = Subtotal 1 with Mobilization + Escalation to NTP					\$2,203,653.00
		Design Contingencies	10%	+/-			\$196,347.00
		Subtotal 3 = Subtotal 2 + Design Contingencies					\$2,400,000.00
		Allowance for Procurement Strategies (APS)	0%	+/-			
		Type of solicitation assumed is: Competitive Request for Proposal					
		Subtotal 4 = Subtotal 3 + APS					\$2,400,000.00
		CONTRACT COST					\$2,400,000.00
		Construction Contingencies	20%	+/-			\$500,000.00
		FIELD COST					\$2,900,000.00
		Non-Contract Costs	30%	+/-			\$900,000.00
		(Environmental Cultural / Mitigation ~ 7%, Engineering Design ~ 5%, Maintenance Service Contract ~ 5% Procurement ~ 2%, Inspections ~ 10% and Closeout ~ 1%)					
		CONSTRUCTION COST					\$3,800,000.00
		Note: initial estimate completed 4/17/11, revised non-contract costs 5/12/11, design contingency costs 6/9/11					
		Ref.: For appropriate use and terminology, see Reclamation Manual, Directives and Standards FAC; 09-01, 09-02 and 09-03.					

QUANTITIES		PRICES	
BY Rick Benik	CHECKED Stephen Latham	BY  Greg Akins	CHECKED  Shawn Akins 6/9/11
DATE PREPARED 03/24/11	PEER REVIEW / DATE Tom Hepler P.E. 3/25/11	DATE PREPARED 6/9/11	PEER REVIEW / DATE  6/13/11

FEATURE: Klamath River Dams Removal Partial Removal Option Copco No. 2 Dam & Powerplant Removal Most Probable Life Cycle				PROJECT: Klamath River Oregon				WOID: AF652 ESTIMATE LEVEL: Feasibility REGION: MP UNIT PRICE LEVEL: Jul-10 FILE: U:\2011 Projects\Klamath\002 Completed Sheets\MP MPL MPH\02 - Copco 2\MP\Copco 2 Probable.xlsx\Life Cycle Summary
PLANT ACCOUNT	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT	
	1	Furnish, install, and maintain a 7-foot-high chain link fence on all four sides of the powerhouse (assume a double 12ft wide gate for vehicle access) (assume replace two times)	86-68130	500	lf	\$60.00	\$30,000.00	
	2	Repaint exposed portion of penstocks (assume repaint 5 times) <i>Estimate assume minor paint repair ~ 2% area</i>	86-68130	18,300	ft2	\$4.50	\$82,350.00	
	3	Repaint sloping trashrack at penstock intake (quantity based on repainting all four sides of each 4" by 1/2" bar in trashrack, 48-ft-wide by 32-ft-high vertical opening, includes top plate) (assume repaint 5 times) <i>Estimate assume minor paint repair ~ 2% area</i>	86-68130	8,900	ft2	\$5.00	\$44,500.00	
	4	Repaint gratings at penstock intake (quantity based on repainting all four sides of each 5/16" by 2 1/4" bar in grating, assume repaint five times) <i>Estimate assume minor paint repair ~ 2% area</i>	86-68130	1,300	ft2	\$7.50	\$9,750.00	
	5	Repaint caterpillar gate (assume access available to both sides of gate, assume repaint five times)	86-68130	1,800	ft2	\$7.50	\$13,500.00	
	6	Repaint caterpillar gate hoist structure (assume repaint five times) <i>Estimate assume minor paint repair ~ 2% area</i>	86-68130	1,400	ft2	\$7.50	\$10,500.00	
	7	Repaint trashrake superstructure (assume repaint five times) <i>Estimate assume minor paint repair ~ 2% area</i>	86-68130	370	ft2	\$12.00	\$4,440.00	
	8	Furnish, install, and maintain a 7-foot-high chain link fence on all four sides of penstock intake structure (assume single 3ft wide gate for access) (assume replace two times)	86-68130	350	lf	\$60.00	\$21,000.00	
		LIFE CYCLE SUBTOTAL					\$216,040.00	
QUANTITIES				PRICES				
BY Rick Benik		CHECKED Stephen Latham		BY  Greg Akins		CHECKED  5/13/11		
DATE PREPARED 03/21/11		PEER REVIEW / DATE Tom Hepler P.E. 3/24/11		DATE PREPARED 5/13/11		PEER REVIEW / DATE  5/13/11		

FEATURE: Klamath River Dams Removal Partial Removal Option Removal Site Maintenance Most Probable Life Cycle - 50 Year Operation and Maintenance - Periodic Costs		PROJECT: Klamath River Oregon					
		WOID: AF484		ESTIMATE LEVEL: Feasibility			
		REGION: MP		UNIT PRICE LEVEL Jul-10			
		FILE: U:\2011 Projects\Klamath\002 Completed Sheets\MP MPL MPH\02 - Copco 2\MP\Copco 2 Probable.xlsx\Template Sheet 1					

PLANT ACCOUNT	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
	1	Site Maintenance - Annual: Copco 2 Site only*		1	LS	\$46,000.00	\$46,000.00
		Labor needed per year - threes sites:	86-68130	120	mdy**		
		3-Man maintenance crew					
		6 Months active inspection/maintenance					
		2 Weeks full time (1 month each spring)					
		4 Full days, 2 times each month (5 months)					
		Site maintenance required at JC Boyle, Copco 1 & Copco 2					
		<i>Estimate prorated the time at each dam site based on percent of total partial removal construction costs</i>					
		Equipment needed per year	86-68130	40	dy***		
		1-Service truck					
		Includes compressor, welder, generator and general tools					
		<i>Estimate prorated the time at each dam site based on percent of total partial removal construction costs</i>					
		Materials needed per year (percentage of labor & equipment)	86-68130	15%			
		Road maintenance needed per year (percentage of labor & equipment)	86-68130	10%			
		<i>*Total estimated cost for all 3 sites is approximately \$161,000 annually: prorated ±30% for Copco 2 site</i>					
		<i>** Man days per year for 50 years</i>					
		<i>***Days per year for 50 years</i>					
		SUBTOTAL THIS SHEET					\$46,000.00

QUANTITIES		PRICES	
BY Rick Benik	CHECKED Stephen Latham	BY  Greg Akins	CHECKED 
DATE PREPARED 04/18/11	PEER REVIEW / DATE Tom Hepler P.E. 4/18/11	DATE PREPARED 4/25/11	PEER REVIEW / DATE 